

CHAMBERS'S JOURNAL

OF

POPULAR

LITERATURE, SCIENCE, AND ART.

Fourth Series

CONDUCTED BY WILLIAM AND ROBERT CHAMBERS.

No. 587.

SATURDAY, MARCH 27, 1875.

PRICE 1½*l.*

RECENT DISCOVERIES REGARDING BURNS.

Of these discoveries, some of which have been noticed in the *Athenaeum* and other journals, the most important is that concerning the poet's relations with the Board of Excise, which have hitherto been involved in mystery. That body has come in for a good deal of odium, which circumstances have done not a little to intensify. Although Lockhart was able to shew that in the books of the old Edinburgh Board there was recorded no censure of Burns for his supposed Jacobinical opinions, and although Dr Robert Chambers, in his Life and Works of the poet, has proved, beyond all possibility of question, that Burns's seemingly maddest act—his purchasing and sending to the French Legislative Assembly the four carronades which he himself was mainly instrumental in capturing, with the brig that carried them, in the Solway Firth—could not be regarded as a breach of decorum 'by any person entitled to take notice of his conduct,' the belief was long held, that, on account of some indiscreet speeches, such as his proposing the toast of Washington as a preferable one to that of Pitt, at a dinner-party, his chances of promotion in the Excise, if they were not absolutely destroyed, were so affected, that his supposed neglect preyed upon his mind, and in various ways hastened his end. A communication, however, which was made at the last dinner of the Dumfries Burns' Club, by Mr M'Fadzean, of the Inland Revenue Office, if it does not absolutely exonerate the Board of Excise and the Scottish gentry of the time of all blame in connection with the poet, places the conduct of the former in a more pleasing, and also more intelligible light. This communication states, that 'when the Inland Revenue Office was removed in 1856 to the new wing of Somerset House, it was found necessary to destroy a large number of old books and stores; and whilst a number of men were employed cutting them up, preparatory to their being sold as waste-paper, a gentleman in the Inspector's Department (Mr M'Fadzean's father, we believe)

superintended the operations, with authority to preserve everything that appeared to be of permanent value, or that might be required for future reference. Observing, when engaged on this duty, books and papers that had belonged to the old Excise Office in Edinburgh, he instituted a general search for information about Burns, and his efforts were rewarded with the following success: First, Burns's official character was found recorded in two places; second, registers where he was minuted for promotion; and, third, a list containing the whole staff of officers in Dumfries Collection. The first station to which the poet was appointed was designated Dumfries First Itinerancy, which appears to have embraced a considerable extent of country.

'On the 28th July 1790, he was promoted to Dumfries Third Division, or Footwalk, and in this station his duties appear to have consisted principally of the survey of tobacco, as it was called the Tobacco Division. His next appointment, dated the 26th April 1792, must have been at his own request, and was to Dumfries First Division, and this was his last station. On the 27th January 1791, the Commissioners entered Burns on the list for promotion to the rank of supervisor, and he remained on this list till his death, the word "Dead" being written in the column for the date of promotion; and had his death occurred only a few months later, Burns would in the ordinary course have been promoted on the 12th January 1797. With reference to this promotion list, it may be observed that several names had been struck off it, including the officer that immediately succeeded the poet. Again, a register was kept of all censures issued by the Board of Excise, and the absence of Burns's name from the register proves that he was never censured by the commissioners—not even in the mildest form in which they were in the habit of conveying their displeasure for what they characterised as trivial faults. And to see how much this circumstance proves in favour of his general good conduct and attention to business, it must be borne in mind that, during the time Burns was in the service, all the Excise duties imposed by Pitt at the close of the

American War were in full force ; and it will convey some idea of how multifarious were the duties of an Excise officer in those days, when it is stated that the amended instructions issued in 1804 formed a volume which in outward appearance was not unlike a large Family Bible, and extended to nine hundred and thirty-nine pages. Now, taking these circumstances into account, it may safely be averred—and the averment will not be disputed by any revenue officer of experience—that at the time now spoken of, none but painstaking, careful, steady officers could avoid, or, in practice, did avoid, the irregularities in business which have been adverted to above as “trivial faults.” All the officers in Scotland were alphabetically arranged, with a brief statement of the character of each in the margin. A list of this description was made up three months after Burns joined the service, and the marginal entry opposite his name is, “Never tryed, a poet ;” with a subsequent interlineation, “Turns out well.” Three years later, a corresponding list was prepared, and the entry in it is, “The poet, does pretty well.”

These discoveries prove clearly that Lockhart was right in his assertion, that whatever may have been said of Burns to the Board of Excise, and whatever verbal reprimand may have been administered to him, for his imprudent expressions of political opinion, through his friend and official superior, Collector Mitchell, no censure was recorded in writing against him. They shew, moreover, that whatever the Excise Commissioners may have thought of Burns, they never proposed to deprive him absolutely of all chance of promotion in the service. He was entered on the list for promotion to a supervisorship in 1791, and remained there till death, never even being struck off for a period, and then reinstated, on account of his having regained the good graces of the Board, by such manifestations of loyalty as joining the Dumfries Volunteers, and writing the best patriotic songs of the time, except those of Campbell.

Regarding the marginal entries of the censors of the Excise, who were, there can be little doubt, the district Collectors, Mr M'Fadzean observes : ‘They are obviously made with inimitable candour, and the register clearly shewed no forbearance to any unfortunate sinner who had a weak side to his bottle. For instance, it was recorded of one that “he was once a good officer, but now tippling ;” another was a “trifling officer, drinks ;” whilst a third was put in the pillory as a “drunken creature.” To these may be added a “lazy supervisor, much given to his bottle,” and a “middling officer, likes a glass.” The same merciless vein of plain speaking runs through the register on almost every weakness to which flesh is heir. An amiable enthusiast had a “bee in his bonnet,” and a certain Highlander, who must have been very unlike his kin, had a “bad moral character.” One was a “conceited trifling officer ;” another was “slow, needs spurring ;” and there is also a “good officer, but insolent ;” as well as a “gentleman scholar.” An Aberdonian, of a practical turn of mind, “had a farm, and attended to it more than to the revenue ;” and it is recorded of a Lowlander that he “was active, and much for his own interests.” A glance at the entries under B, in which list, of course, the name of Burns occurs, confirms the im-

pression that, in the eyes of his censor, the poet was a more than ordinarily good officer. ‘A careful officer,’ ‘A good officer,’ are the most eulogistic entries given ; and for one such, there are ten like ‘Indifferent,’ ‘A blundering officer,’ ‘Can do, but drinks,’ and ‘A sober, weak man.’ It may indeed be said that the latter entry about the poet is not so good as the first, and looks not unlike damnation by faint praise. It by no means follows, however, that the censor’s second report proves that Burns had begun to fall off in the performance of his duties, or had taken to intemperance, at least to the prejudice of his daily work. Further, an examination of dates would seem to prove that this second entry was made on or about January 1, 1793, and contained, consequently, a criticism of the poet’s official conduct during 1792. Now, that was emphatically the poet’s unfortunate year. It was then that he committed his most notable indiscretions, that ‘he got the *Gazetteer*,’ a violently political newspaper ; and it was in the end of it that he wrote his piteous letter to Mr Graham of Fintry, beginning : ‘I have been surprised, confounded, and distracted by Mr Mitchell, the collector, telling me that he has received an order from your Board to inquire into my political conduct, and blaming me as a person disaffected to government ;’ and ending : ‘I adjure you to save me from that misery which threatens to overwhelm me, and which—with my latest breath I will say it—I have not deserved.’ It is quite possible, therefore, that ‘Does pretty well’ does not mean that, in the eyes of the writer of it—probably, Collector Mitchell—Burns had become a negligent or dissipated officer, but that he would have been a still better servant if he had kept his opinions, especially on politics, to himself. This view of the matter seems to be confirmed by this passage in the remarkable letter he wrote, in April 1793, to Mr Erskine of Mar : ‘One of our supervisors-general, a Mr Corbet, was instructed to inquire on the spot, and to document me, that my business was *to act, not to think* ; and that whatever might be men or measures, it was for me to be *silent and obedient*. Mr Corbet was likewise my steady friend ; so, between Mr Graham and him, I have been partly forgiven ; only I understand that all my hopes of getting officially forward are blasted.’ Burns, however, as time passed, as the political ferment cooled, and his own loyalty was sufficiently demonstrated, began to hope again ; he looked forward not only to a supervisorship, but to a collectorship.* He was acting as a supervisor when his last and fatal illness seized him ; and the register of the Edinburgh Excise Board, now unearthed, proves that his hope was well founded, and that, had he lived a few months longer, he would have been promoted. The most and worst that can be said, therefore, against the Board of Excise, is, that it delayed Burns’s promotion ; and is it very much to be wondered at, that, in the political frenzy of the time, alarmed officials thought of the poet simply as they would have thought of any other officer, and did not pause to

* It is commonly declared that a supervisorship would have made Burns happy ; but, in a letter to Mr Heron of Heron, in 1795 (*Life and Works*, vol. iv. p. 146), he says : ‘The business is an incessant drudgery, and would be nearly a complete bar to every species of literary pursuit.’ He only looked forward to it as a step to a collectorship.

inquire whether his Jacobinism, like his Jacobitism, was not mainly a matter of sentiment? It is absurd to maintain that the Board's treatment of Burns killed him, or that he himself thought so.

The men and women who were contemporaries of Burns, and are also of such an age as to remember him discharging duty as exciseman, are rapidly dying out. One of the most intelligent of these was Mrs Bennett, Moniaive, Dumfriesshire, who died in February 1874, in the ninety-eighth year of her age. Mrs Bennett was the daughter of a blacksmith of the name of Kirk, who lived in the village of Carronbridge, and who would appear to have connived at, or carried on, a traffic in liquor, that caused him to be occasionally visited by the poet-gauger. The blacksmith's daughter was then about ten or eleven years of age, and was consequently able to notice how Burns did his work. The following story, which she communicated to a writer in a Dumfries newspaper, is worth recalling: 'A man named Matthew Milligan left a considerable quantity of smuggled brandy in a greybeard at the blacksmith's house; it was concealed in a locked press; and the blacksmith and his wife having to go to the shearing on Carronhill, and also dreading a visit from the gaugers, gave the key of the press to Margaret (Mrs Bennett), with strict injunctions that she should on no account give the expected visitors access to the press. Sure enough, in the course of the day, Burns and the supervisor arrived, and the latter had evidently got scent of the smuggled brandy, for he plied the girl with questions on the subject, and was particularly desirous to see the inside of the press. In this, it appears, he could not be accommodated; and then he demanded that its contents should be described to him, which was done with considerable facility, but with no mention of the greybeard. Mrs Bennett was accustomed to tell with considerable humour how anxious and concerned the poet looked lest the press should be opened. He doubtless guessed what it contained, and knew well how serious a penalty would fall on his friend the blacksmith in the event of the brandy being discovered. "At one time," she said, "he winked hard at me over the supervisor's shoulder to be sure no to let on." The result was that the supervisor was baffled, and the brandy was undetected. On another occasion, when Burns was leaving the house, after an official visit, she heard him say to her father: "Well, well, smith, so long as you take care of yourself and take care of the bairns, I will never hurt you."

These anecdotes—similar to those of Allan Cunningham and Professor Gillespie—are quite in accordance with the theory of Burns's biographers, that, as Dr Robert Chambers puts it, 'inspired with a just view of the contraband trade as an infraction and disturbance of the rights of the fair trader, he was disposed to be severe with the regular smuggler; but in petty matters of inaccuracy, or even something worse, among the country brewsters and retailers, he tempered justice with mercy.' That same infinite tenderness which was the essence of his strength and his weakness, which made him not only feel for all mankind, but even for the Daisy and the Mouse, and which made him give 'slices of his constitution' to people little worthy of such gifts, constrained him to wink at the pecadilloes of the Carronbridge smith, provided he attended to his 'bairns.'

As we are dealing with Burns, the fate of the celebrated Glenriddell manuscripts demands a slight notice. Readers of the poet's life will remember that, when he entered upon his farming experiment at Ellisland, he found as his nearest neighbour, Captain Riddell of Glenriddell, one of the heroes of *The Whistle orgie*, and that a close friendship sprung up between them—terminated only by Burns's unfortunate quarrel with Mrs Maria Riddell, the wife of Glenriddell's younger brother. When this intimacy was at its height, Burns wrote out for Riddell's library a volume of selections from his letters, and another of select poems; the one extending to one hundred and three pages, the other to one hundred and sixty-two, of which seventy-eight are in Burns's own handwriting, the remainder copied by amanuenses, and corrected by him. After his quarrel with the Riddells, Burns made repeated attempts to get possession of these volumes, but failed. On his death, they fell into the hands of Dr Currie, who made use of their contents in his edition of the poet's works. In 1853, the widow of Dr Currie's son, Mr Wallace Currie, presented the volumes to the Athenaeum Institution in Liverpool. There, for twenty years, they remained locked up out of sight. At last, however, they have been placed in a glass case in the library of the Institution, and are thus accessible to the public. This has been done at the suggestion of Mr Henry A. Bright, a member of the Liverpool Athenaeum, who has also published, for private circulation, a thin quarto volume, containing a complete catalogue of the poetical portion of the manuscripts, and giving in full such pieces as were unpublished. Interesting as such a book must of course be, it will not in any material way affect the reputation of the poet. Such has been the industry of Burns collectors, that Mr Bright is only able to print eight pieces, four of which he believes to have been never published before, while of the other four only imperfect copies have hitherto been published. Of the new pieces, little need be said; they are poor; and the addition to the Clarinda correspondence—an answer to a poem, *From Clarinda, on Mr B.—'s saying he had nothing else to do* (which Mr Bright thinks it possible may have also been written by Burns)—is in his most affected style. Perhaps the most interesting fact that the Glenriddell manuscripts—now that they are in a manner given to the public—bring out is, that the manuscript volume of poems was a gift to Glenriddell, and not a loan, as Dr Robert Chambers and other editors and biographers believed. In a short preface to this volume, the author, after both predicting that its contents would be given to the world, and deprecating such an action, says: 'At the gentleman's request, whose, from this time it shall be, the collection was made; and to him, and, I will add, to his amiable lady, it is presented, as a sincere, though small tribute of gratitude, for the many happy hours the author has spent under their roof.' The words we have italicised place the fact of the volume being a gift beyond dispute. A glance at the Burns manuscripts also shews what liberties worthy Dr Currie took with expressions of the poet, with the good intention of modifying and softening them. Numberless instances of this could be given; but we give only one, in which we are not quite certain that the Doctor's modification is to his hero's

advantage. Referring, in his autobiography, addressed to Dr Moore, to the fact of his having gone to a dancing-school, in opposition ('defiance' is the word in the manuscripts) to his father's commands, he says: 'My father, as I said before, was the sport of strong passions.' Dr Currie, who hardly leaves a line of the passage from which this is taken untouched, gives us this: 'My father, as I said before, was subject to strong passions.' If the quiet-living father was unable to control his passions, as asserted in the former sentence—a view the very opposite of which was held by Gilbert Burns—there need be little wonder that the more tempted son should be 'by passion driven.'

WALTER'S WORD.

CHAPTER XXV.—HOW HE DID IT.

As Walter had expected, he found, upon reaching Beech Street, that his friend had arrived before him. He found him walking up and down his studio with quick strides, without his pipe (which was itself a portent), and with his hands behind him, still gloved. Jack seldom wore gloves, but if compelled to do so, was wont to tear them off upon the first opportunity, as though they had been the tunic of Nessus.

'My dear Jack,' said Walter, 'is it really to the influence of your eloquence with Mrs Sheldon that I am indebted for this great service? I heard her, with my own ears, tell Lilian that she had altered her plans, and would not accompany them to Sicily.'

'To my influence—yes; to my eloquence—certainly not,' returned Pelter gravely. 'I used no honeyed words.'

'Whatever words you used, I am most grateful to you, as Lilian too would say, did she know to whom she was indebted.'

'It cost me something, lad,' sighed Pelter, throwing himself into a chair—'something that snug sleek men declare they value beyond all else, and which is dear even to me—namely, Self-respect.'

'I hope not, Jack; not for my sake, nor—nor any one's.'

'Ay, but it was so, for I had to lie to her, and, what is worse, to threaten her. Fancy using threats to a woman!'

'But why should she fear you, or your threats either?'

'Well, that's too long a story to tell now. But don't you remember, Walter, how, at the beginning of this Willowbank business, and when we were speculating as to who had sent the offer for your Philippa, that I gave you a leaf of my life that you might take a lesson from it—how, when I was young, and honest and credulous—like yourself, I was once fooled by a woman. You know what Pope says about the sex, and that I don't go with him; but in this case he was right. Intrigue was the atmosphere of that woman's life, and men's hearts her playthings. But she had not the wit for the work, or she would never have lied except with her tongue; as it was, she did so in black and white, and amongst others, to me. When we parted—when she flung me aside, like yonder glove!—and he cast one violently on the floor, 'she asked me to give her back her letters; but that was impossible, because I had burned them every one, before she asked me. Judging me by

her own crafty, treacherous self, she did not believe me, and I took no pains to convince her; since she chose, after all that had passed between us, to think me capable of a base revenge, I let her do so; and to-day she suffered for it.'

'Then you knew who this Mrs Sheldon was, from the moment I mentioned her?' observed Walter.

'I guessed it, lad. It was not the name I had known her under, but I heard that she had taken it; and, besides, I recognised your portrait of her. As for her face, I should have known it, had I not seen it for twenty years, instead of ten, at the first glance. "It can make no more mischief among men, so you have set it against your own sex, madam, have you?" That shaft went home, I promise you.'

'What! you told her that?' exclaimed Walter excitedly.

'Ay, and she knew who was meant. At first, she thought I was pleading my own cause, not yours; but I undeceived her there. I told her that it might have been so once; that years ago, I might have loved some pure and simple girl, such as your Lilian, had my experience of woman-kind been happier in those days; but as it was, that I had had no cause to trust in woman. She tried to fool me even then; 'tis second nature with her, and first as well; but she might as well (as I told her) have fawned upon the turnstile. Then I made her understand not only that her past, but that her present was known to me, even to the fact that, with her nephew's aid, she was angling for the rich merchant.'

'What! are you jealous, then, dear Jack?' sighed she.

'I declare it made me laugh aloud to hear her.'

'No,' said I; 'I was not jealous, but resolute that her marriage with Mr Christopher Brown should not take place—that I was acquainted with her plans, and meant, so far as he was concerned, to prevent them; not, indeed, for his sake, but for his daughter's; and, to begin with, that she was not to accompany the family to Italy.'

All this had been told in a quiet cynical manner, very different from Pelter's usual tone; but when here, amazed, Walter inquired what right his friend had had to control Mrs Sheldon's movements, he answered vehemently: 'What right? Why, the right of the strongest. Is it for you to have scruples—you, who affect to love this girl, and would have me preserve her—scruples against a serpent? She is harmless now; but, let me tell you, my snake-charming was not done by soft words.'

'Indeed, my friend, you mistake me,' cried Walter; 'every one has a right to protect the weak against the wicked. I used the word as Mrs Sheldon would have used it. Did she not resent, I should have asked, this interference with her arrangements?'

'Of course she resented it; she would have struck me dead, if looks could have done it. But she never questioned my right, nor even my motives.'

'You would not have dared to speak to me like this,' was all she said, 'if you had burned those letters. It is not only women, then, who tell lies.'

'Nothing that I know—or which I hold in my possession—shall be used to your disadvantage, madam,' replied I respectfully, 'if only you will be

ruled by me in this particular matter. If otherwise, it will be my painful duty to place in Mr Brown's hands a certain note—I think you will remember it!"

"You coward!" she broke forth. If I had really kept that letter, she would have spoken truth; and even as it was, lad, I felt like a whipped cur. Do you understand, now, that I have done something more for you to-day than put on a tall hat?"

"Indeed, indeed, I do, Jack," exclaimed Walter earnestly.

"Yes. But if our positions had been reversed, you feel that you could not have done as much yourself for me?" answered Pelter bitterly.

"I did not say that, Jack. Good heavens! do you suppose that I am reproaching you for sacrificing (as you said) your self-respect for my sake?"

"Well, this much I must needs say in my own justification: it was not altogether for your sake, Walter. It was for this young girl's sake also, whom I have never seen, except on canvas. If she is as good as she is beautiful, it was my bounden duty to defend her from that most unscrupulous of enemies, a jealous woman."

"Of course, I know Mrs Sheldon is Lilian's enemy; but why should she be jealous of her?"

"Because Mrs Sheldon failed where she has succeeded. Did she not fail, man, in winning your smiles down at Penaddon?"

"She surely never told you *that*, Jack!" cried Walter.

"Certainly not; nor did you either; but yet I knew it. She must either fail or succeed with every man that comes her way. Well, *this* being so, I knew she would stick at nothing in the way of revenge; and, as it happens, interest and vengeance in this case went hand in hand together. She is as poor as a church mouse, as I conjectured, and is playing for a great prize in Mr Christopher Brown; and could she have hooked the father, it would have gone hard with her step-daughter, you may take my word for it. Even as it is, the poor girl has, in my opinion, a very dangerous relative in her new-found brother-in-law; a Frankenstein, too, you should remember, lad, in some respect of your own creation."

"I know it," groaned Walter despondingly. But what can I do? I can't stop Selwyn from going to Italy, as you have stopped his aunt."

"No; but you can do something else. Your patron at Willowbank has paid you for your picture in advance; thinking, thereby, to close all connection with you, no doubt. You have the sinews of war, then why not carry it into the enemy's country?"

"Into the enemy's country?" repeated Walter. "I don't quite see what you mean."

"Well, in other words, then, here is a young painter, devoted to his profession, and with a pocket full of money; what is more natural, and right and proper, than that he should wish to visit Italy, the temple of Art, the very cradle?"

"By Jove, I'll go!" cried Walter, leaping to his feet.

"Of course, you'll go, though you needn't have interrupted a fellow in what promised to be a very pretty flight of eloquence. I shall miss you, of course, but then I shall feel that you are improving your mind. You must not confine yourself to picture-galleries, remember, but study the out-door

effects of nature—the southern skies and seas. They say Sicily is a good place for filling your sketch-book. Suppose you go to Sicily first, and work your way up from the toe of the boot!"

"My dear Jack, you are the best adviser that ever man had!" cried Walter with enthusiasm.

"That always seems so, when one's advice happens to chime with one's friend's wishes," observed Pelter, composedly. "You must not be too sanguine, however, Sir Knight-errant; it seems to me that you have got your work cut out for you; even if you should save the young lady from the dragon, it will be a tough job to win her."

"I do not think of winning her," answered Walter earnestly; "if I can only be of use to her; only let her know, when far from home, and, as she supposes, friendless, that she is not without a friend; if I can unmask this man, and shew her doting father what he is!"

"You will ask no other reward," interrupted Pelter dryly. "That is very wise, and very pretty; but everybody has not your disinterestedness. For myself, I feel that I have earned something at your hands, my lad; and I will thank you to brew me a little whisky-punch in the manner with which you are acquainted, and which the Faculty have recommended for my complaint."

CHAPTER XXVI.—NEW LODGINGS.

It is late October, but where Walter Litton has, for the present, taken up his abode, all nature still wears her summer dress. It is early morning, but the air, though welcome and refreshing, breathes on him soft and warm, as he stands on the balcony in front of his lodgings, and looks out on sea and shore. So different is the scene that morning is wont to present to him, that it verily seems to be another world. In Beech Street, he was fortunate if at such a time the fog permitted him to see the sky. *Here*, the heavens are smiling on him without a cloud, and the sea reflects their smile on its smooth bosom. Above him, in serene stillness, rise high purple hill-tops, the very names of which he has not yet mastered, and which have still for him that mysterious charm which belongs to mountains which we see, but have not yet trodden. Below, is a broad highway—the Marina—at this hour, silent and deserted, but which will, later in the day, be thronged by equipages, vying with that of the Lord Mayor of London for splendour and bad taste. The streets, too, as yet are silent, although life has begun to stir in the alleys that feed them, and in which common shops full of fish, and fruit, and flowers, are already open. Out of windows hang to dry things both rare and common; namely, clean linen and macaroni. But at the elevation at which our hero stands, not only do the beauties of nature appeal to his artist-soul with irresistible force, but even what is in reality mean and sordid, becomes picturesque. The result is, therefore, a picture that has no flaw, set in a frame of gold and azure. As the morning advances, the gold increases, flowing in, as it were, upon the picture itself; till, presently, he perceives why the tall houses looking seaward are so brown, and also the advantages that may result in some climates from living in an alley, with only a strip of sky to light it. The growing glow and heat, indeed, are such as soon to drive our hero from the balcony into his chamber, a scantily furnished room—as

furnished apartments go in England—but wonderfully clean for Palermo; the reason of which can best be explained by an introduction to the proprietor of the house, whose modest knock at the door has already been repeated without arousing the attention of his new tenant, absorbed by the beauties of sea and land.

A small, spare Sicilian, who now enters with the breakfast equipage, Signor Baccari, like his house, has a half-baked look, which might lead the uncharitable to suppose him averse to the use of water; he was indeed averse, for he was a Sicilian, but for all that, he used it, being, as we shall hear, under a vow—though to no saint, for saints always stipulate for dirt—to do so.

'Good-morning, signor. You have slept well, I trust?' said he, in tolerable English.

'If I have not, it was no fault of the arrangements made for my comfort,' returned Walter warmly.

Baccari bowed, and shewed his teeth, white as the mice of any organ-grinder of his race.

'To please the friend of one's friend, is to please one's self,' he answered. 'So soon as his letter reached me, said I to my wife: "Scrub everything—the tables, the chairs, the floors." It was Signor Pelter's weakness to have everything scrubbed; and the weakness of those we love is to be respected.' If Signor Pelter had been dead, and his Sicilian friend had been referring to the fulfilment of his last request, his tone could not have been more grave and pathetic.

'Your good-will is, I am sure, reciprocated,' observed Walter, smiling. 'When Mr Pelter found I was resolved to visit Sicily, he said: "I have one good friend there; if you visit Palermo, ask for Signor Baccari, in the Piazza Marina. I spent a winter at his house in my young days, when I thought I was going to be a Raphael, a Murillo, a Tintoretto—three single gentlemen-artists all rolled into one." You remember his style?'

'Is it possible to forget it? Heavens, what a genius he had! I have in my little room above-stairs his view of the harbour. It is the place itself! He was ever upon the sea, you know—the deep, smiling, treacherous sea!' And Signor Baccari crossed himself like lightning, and muttered something that sounded between a curse and a prayer.

'You do not like the salt-water, then, yourself?'

'I! How can you ask me who know what happened! I detest it! I abhor it! I fear it worse than the brigands. What! body of Bacchus, did he never tell you why—he who preserved my Francisco?'

'Never; he only mentioned that you and he were old friends.'

'Is it possible? To be sure, he is not one to talk of his good deeds; if so, he would be always talking. And yet, look you, because he is a heretic, there are some who would hold him worse than a brigand. Bah! what stuff.—Forgive me, signor, for spitting on the ground. That was one of his prejudices, and it should have been respected. "If you must spit, my dear Baccari," he would say, "spit in the sea." He was so droll!'

'But how was it he saved your Francisco?'

'O sir, we were in a boat together—Francisco, then a little child, my wife, and I, all fools for being there—with the signor and a fisherman; out

in the next bay to the west, yonder, which is more beautiful than this, folks say, or than the Bay of Naples. But to my wife, with the child in her arms, nothing seemed so beautiful as to watch the reflection of his innocent face in the deep deceitful sea. So, while she was leaning over the boat-side—it is terrible even to tell of it!—the boy leaped out of her arms; there was a little splash, and then all the light of our life was quenched for ever!'

'But your son was not drowned, for I have seen him.'

'No; thanks to Santa Rosalia—and a heretic—he was saved. Our friend was with us, brave, agile, and who swims like a fish. Hardly had that little splash faded from our ears—as the knell of a death-bell dies away—when there was a big splash—that was Signor Pelter; O sir, I shall never forget it—"a header," he afterwards called it; and he then comes up with the child in his mouth—I mean, in his arms—like a water-dog. It was nothing short of a miracle. What could I say to that hero, who had thus rescued our darling from the jaws of death? Nothing—nothing that could make him understand my gratitude! "Oh, what," cried I, "noble Englishman, can I ever do for you or yours?"

"Wash, my dear Baccari, wash a little occasionally, for my sake," was his reply. Hence it is that our house alone, in all Palermo, is always water-flooded. "You will die of the damp," say the neighbours; but we are not dead yet; neither I, nor my wife, nor our good Francisco. Is it wonderful that we have done Signor Pelter's bidding, and are always clean? Is it wonderful also that to me the sea is more terrible even than the brigands!'

'Are the brigands, then, so very alarming?' inquired Walter. 'I understood that you good folks who dwell in towns, at least were safe from them.'

'Safe! Holy Rosalia, nobody is safe!' answered the other, sinking his voice. 'It is not safe even for us two to be talking of them. They have spies everywhere; allies everywhere. Why, the Marina, yonder, is the only road in Palermo that a rich man dare take his pleasure upon. On all other ways—if he goes to Messina, for example—he must take a mounted escort. To think that a couple of miles out and in, is all that a man dare travel, here in Palermo, because of brigands!'

'My dear Mr Baccari,' said Walter, smiling, 'it appears to me, since our friend Pelter never even so much as mentioned their existence, that you have got brigands on the brain.'

'Pardon, signor; it seems so, doubtless.—Your breakfast is prepared.'

It was evident that the feelings of the little lodging-house keeper had been wounded. In vain, before sitting down to his meal, Walter endeavoured to explain away his unfortunate observation.

'The Signor Litton is mistaken; I am not out of my mind, as he has been pleased to imagine, was all that his apologies could for some time extract from his host. But presently, when Walter had explained to him that in England there were no brigands, absolutely none, and that, therefore, all reference to such unpleasant folks had for him an air of fable, he grew mollified.

'The signor, then, is blest in his country,' was his grave observation; after which, he inquired whether it had always been so favoured.

'Well, we had once robbers and outlaws,' admitted Walter, 'but certainly never in broad day, and in the neighbourhood of our towns. There was Robin Hood, for example, centuries ago, whose band, however, was said to plunder the rich only, and not the poor.'

'Ah, but *these* rogues, they plunder everybody,' put in the Sicilian, once more astride upon his hobby; 'though it is only when some great man has suffered that the affair is made public. My neighbour here, Loffredo, for example, a man as poor as myself, was taken up the mountain last spring, and had to pay so much for his ransom, that he and his family are beggared.'

'I would have let them kill me first!' exclaimed Walter indignantly.

'Yes; but your wife could not—that is, if she loved you, as in this case. Loffredo refused to pay more than such and such a sum—which would not have utterly impoverished him—whereupon one comes down here, into the very next street, yonder, and brings something with him. "Madam," says he, to Loffredo's wife, "do you recognise this ear?" They had begun to mutilate the poor fellow; and without doubt he would have died by inches, had she not sold all, and sent the required ransom. Again, in the early morning (for the poor fellow shrinks from shewing himself in the crowded streets), you may see any day Signor Spillingo with but one arm, and without a nose. The poor gentleman, captured by these scoundrels, had not the money at command to satisfy them; but his friends scraped together what they could, and sent it to the captain of the band. "This is not enough ransom for a *whole man*," he said, and thereupon reduced him to the pitiable spectacle which I have described. To bring one's children to want, or to lose life and limb, these are the hard alternatives; severe punishments to pay for a walk outside the city walls in spring-time, signor.'

The good man's manner was so earnest, so pathetic, that Walter was tempted to observe: 'I trust, Signor Baccari, that you yourself have never suffered from these villains, either in purse or person?'

'Thanks be to Heaven, never! But my Francisco was once taken; he was acting as guide to a French gentleman, and, fortunately, being so small a fish, they made use of him in another way; they sent him into the town to state the price of their captive; when, only think of it, Francisco himself was thrown into prison, upon the charge of treating with brigands! The poor innocent lad! Our rulers, you see, cannot put down these thieves; but when a man is taken by them, they throw obstacles in the way of obtaining his liberty.'

Walter could not but acknowledge that this was indeed a pitiable state of affairs, though, in his heart, he thought his host was unintentionally exaggerating matters. An element of humour also mixed with his compassion for Signor Baccari, whose fate it was to live on an island, where on the one hand the sea was forbidden to him, and on the other the land. It seemed impossible for any man, not absolutely a prisoner, to possess a more limited horizon in the way of movement.

Yet Signor Baccari was by no means dispirited by these peculiar circumstances of his existence; his talk, when it was not upon the Brigand topic, was as gay and lively as the twitter of a bird; no stranger would have had a better guide than

he to shew him the lions of Palermo, and if Walter had cared for gossip, the private history of every household in the place would have been at his service, for Baccari knew it all. Francisco, his son, a lad of talent, seventeen or eighteen years old, was generally, however, Walter's cicerone. This youth was a study for a painter; tall, slight, and sunburnt, with poetic grace in his every movement, and a certain cold indifferent manner that would have been contemptuous, but for its stateliness; just as, when a king's air is cold and apathetic, we call it royal. He had no conversation, but since he could speak no word of English, that was of no consequence to Walter, who, on his part, possessed but a smattering of Italian, and no Sicilian save what he found in his pocket dictionary. Still, the two got on very well together, Francisco's eloquence of gesture doubtless making up for a good deal. But what made him especially valuable to Walter was that, unlike his father, he was passionately attached to the sea, and well skilled in the management of a sailing-boat. In vain had Baccari forbidden him, even when little more than a child, to tempt the treacherous smile of the Mediterranean; he had ever taken his greatest pleasure upon it; and now that he was a man—according at least to Sicilian reckoning—he was, in all except the name and the attire (which his father would not permit him to adopt), a sailor.

Litton, too, notwithstanding the attractions which Palermo offered to his artist's eyes, was seldom content to be on shore, nor even in the waters immediately about the harbour. It was daily his practice to take boat and put to sea; to escape from the landlocked bay, with its sheer steeps, until they seemed to dwindle before the presence of snow-capped Etna—a hundred miles away. The beauty of the scene thus left behind them was so transcendent, that it would sometimes win Walter's gaze and hold it, despite of himself, in a species of enchantment; but for the most part, he would fix his eyes to westward, where nothing was to be seen for leagues and leagues but the blue sea, and watch for a certain coming sail; while Francisco lay at length, thinking of nothing beyond the orange which he was slowly slicing, as an English school-boy (only without his eagerness) would slice an apple. Ever and anon, Walter would intermit his watch upon the sailless sea, to take from the pocket of his sketch-book a printed extract from a newspaper, which he would read and read again, as though to assure himself that in the end his patience must necessarily be rewarded: 'On Wednesday last, from Plymouth, the yacht *Sylphide* (Christopher Brown, Esquire) for Palermo.' The weather had been charming; even the Bay of Biscay must have been tolerably tranquil during the passage of the voyagers, but still the *Sylphide* came not. It was unreasonable in Walter to be so impatient, for he himself had started from England on the Thursday, by Paris and Marseille, for the same destination, and the iron horse was, of course, an overmatch even for the swift-winged *Sylphide*. Moreover, she might have touched at Gibraltar, or even at Marseille itself. But there was still another alternative, the thought of which haunted Walter, blurred all beauties of land and sea to his curious eyes, and made him sick at heart. The voyage, in place of benefiting Lilian's health, might have injured it; the *Sylphide*, perchance, might

have put back, or, making for some port, its passengers might have disembarked, and gone home by land. Thus, day after day went by in fruitless expectation ; his sketch-book, notwithstanding the temptations that on every side appealed to him, remained almost blank ; his hand refused its wonted office ; it was only by forcing his mind into the shafts, and making *that* draw, in the shape of acquiring the Sicilian language, that the time could be made to pass for Walter at all. Making every reasonable allowance for probable delays, the yacht was now a fortnight behind her time, when, on a certain evening, just as their own little sailing-boat, far out at sea, had, as usual, put about for home, and Walter, sunk in despondency, was thinking whether it was worth while to remain in Sicily at all, Francisco touched his elbow, and, in his cold indifferent tones, observed : ' Inglesi sheep.' Walter started to his feet, and gazed to westward ; there was many a white sail studding the blue deep, as stars the sky, but he noticed no addition to their number.

' There,' said Francisco, nodding lazily towards the extreme horizon, where something like a puff of smoke was barely visible ; ' Inglesi yat.'

His sharp and practised eye had detected something in the shape of the sail which announced at once her class and nationality.

' Let us put back, and meet her,' exclaimed Walter eagerly, thinking not of the yacht, but Lilian.

Francisco opened his almond eyes a little, the only expression of wonder he ever allowed himself. ' Why so, signor ? when with the breeze she must needs be in Palermo before us.'

So they held on their course, while the ' Inglesi yat' fulfilled Francisco's prophecy by gaining on them hand over hand. For the rest of the voyage, Walter had no eyes except for her. What was the flaming glow of sky and sea, compared with that first gleam which glittered on the sail that brought his Lilian from the under-world ! What was the purple tint of evening upon the mountain-sides, to the rose-coloured dreams of love ! On she came, the yacht ever nearer and larger, till it overtook their little craft. Walter had no need to read the name that was writ in golden characters upon the bows, to know it was the *Sylphide*. An instinct seemed to assure him of the presence of the treasure that was being carried past him—of the neighbourhood of her he loved. From under his broad hat he scanned the deck with furtive glance, though, indeed, there was but small chance of his being recognised. No newspaper had recorded under the head of ' Fashionable Intelligence,' Mr Walter Litton's departure from Beech Street, Soho, for Sicily. By all on board who knew him, he was thought to be hundreds of leagues away, and by all save one—perhaps even by her—to have given up the object of his life as unattainable. But he was there close at hand, if not to win, at least to watch over and defend his Lilian. She was not on deck ; nor did he expect her to be, for the evening air was chill. Sir Reginald alone, besides the members of the crew, was visible. He was standing in the bows, with a cigar in his mouth, looking intently towards the town, which they were now rapidly approaching. To judge by his frowning brow, his thoughts were far from pleasant ones, but they would have been darker yet had he known that the light bark within but

few feet of him, and on which he did not even waste a glance, carried his whilom friend to the same port.

THE TRANSPORT AND STORAGE OF GUNPOWDER.

THERE is now a bill before parliament dealing with the important subject of the transport and storage of gunpowder. This, if passed into law, will in certain respects, though not in all, effect an improvement upon the present state of things. The disastrous explosion on the Regent's Canal will have produced at least one beneficial result, for to it we must attribute all the attention which has recently been devoted to this question. At the present moment, our gunpowder law is a very defective one. Under proper regulations, the explosion of last October would have been an impossibility ; but it seems to have been the constant practice on the canal never to carry gunpowder without an accompanying load of benzoline, and a fire on board the barge ; thus providing everything necessary to produce an explosion, and repeatedly tempting the destruction which came at last.

It would be well if gunpowder were never carried along our canals except in boats specially adapted and licensed for the purpose. The trade in gunpowder is so extensive, that it ought not to be difficult to effect this. The boats might be like those used by government for the transport of the powder manufactured at Waltham, down the river Lea to the Purfleet magazines. These boats are about half the size of an ordinary canal barge, and are covered with a semicircular roof, having a door at the side for loading and unloading the cargo. No lights or fire is allowed on board, and no one enters the hold without wearing a pair of leather ' magazine-shoes ' ; indeed, in every respect the boat is treated as a magazine, and all the rules and precautions observed in the government magazines apply equally to the powder-boats. Of course, to adopt a similar system on our canals, would cost some money, but it would not equal one-fiftieth part of the loss caused by a single explosion ; and it seems to us that either this plan, or some modification of it, should be applied to those which, like the Regent's Canal, wind through the densely populated suburbs of our great cities.

The transport of gunpowder by road is more difficult to regulate. It is now a common thing for not one, but several cart-loads of gunpowder to move together through the crowded streets of London. How dangerous this practice is, may be judged from an incident which took place during the retreat of the French army from Germany in 1813, after the battle of Leipzig. One evening, a convoy of powder-wagons belonging to the French artillery was passing through a small town in Bavaria. One of the barrels in the leading tumbril was leaking, and the powder was dropping from it, and forming a light train along the roadway, which, however, was unnoticed or disregarded by the drivers and the escort. Suddenly, a spark flew from a stone, struck by the iron-shod hoof of one of the horses ; it fell among the scattered gunpowder ; the train was ignited, and the flame ran along the street under the long line of tumbrils, and cart-load after cart-load of gunpowder blew up with a terrible explosion. The houses on each

side of the road, and many of those in the adjacent streets, were destroyed, and more than a hundred of the towns-people and the escort of the convoy were killed and wounded. Yet, fearful as was the destruction on this occasion, there is no doubt that it would be far exceeded by the ruin which would follow an explosion in some parts of London, where gunpowder is being constantly carried through the streets, to be embarked on the Thames; for instance, in Wapping, one of the most populous districts of the metropolis, where this dangerous traffic goes on day after day. No gunpowder should be carried through our streets except within a few hours in the early morning, when the way would be clear for the carts, and there would be no danger of delays, collisions, and the crowding together of several of the loads, as now frequently happens. Only covered vans should be employed in the traffic, and care should be taken that the drivers do not smoke or carry matches with them. If there were a compulsory mark on every powder-van, and a corresponding badge on the driver's arm, it would be easy for the police to note their passage, and see that the regulations adopted were properly carried out.

Very few people are aware of the extent of the gunpowder trade in England, even without taking the export into account. We have gunpowder everywhere around us—in shops; in the houses of gunmakers and sportsmen, or of quarrymen and miners; in the numberless little private manufactories and stores of cartridges and fireworks; and, finally, in larger amounts in factories, magazines, and volunteer storehouses. These last are by far the least dangerous. The gunpowder in government magazines, and in those belonging to great manufactories and Volunteer corps, though often accumulated in immense quantities—at Purfleet there are over fifty thousand barrels—is placed in properly constructed buildings, under the care of trained store-keepers, guided by fixed rules, which reduce the danger of an explosion to a minimum. On the other hand, the amount of gunpowder in the custody of private individuals—who are too often ignorant and careless men—constitutes a real source of danger. We find repeated instances of it in the government inspector's Reports on the storage of gunpowder. It appears that it is a common practice of miners and quarrymen to keep a barrel of gunpowder under their beds. One case where an explosion resulted from the foolhardy carelessness of a quarryman, would seem at first sight incredible, but its truth is vouched for by an official Report. This man had been in the habit of emptying barrels by boring auger-holes in their heads, and pouring out the powder through them. But it occurred to him that he could make the hole more easily by burning it out with a red-hot poker, stopping when it was nearly through the wood, and finishing it with the auger. The plan succeeded admirably so long as he had to deal with barrel-heads of the ordinary thickness; but one day he proceeded to operate upon a barrel the head of which was thinner than usual, though, of course, he had no means of ascertaining this. The red-hot iron reached the powder, and he was killed by the explosion. We only hear of such recklessness when, as in this instance, it leads to a fatal result. The wonder is, that such accidents are not far more frequent. Every mine and quarry where blasting-powder is used should have its regularly

appointed magazine, and the workmen should not be allowed to have any of it in their houses. Under the existing law, any one can keep fifty pounds of powder, and even half that quantity is quite sufficient to destroy an ordinary dwelling-house and all in it; but as the new bill only reduces the quantity to thirty pounds, the danger must still remain.

The law with regard to dealers is still more defective. No license is required at present, though a compulsory registration is provided for by the new act, which permits a shopkeeper to keep any quantity of gunpowder up to one hundred pounds, provided he store it in a fire-proof safe; or up to two hundred pounds, in a magazine or fire-proof safe isolated from his house, and at a safe distance from any thoroughfare or street. Then, for some weeks before the fifth of November each year, hundreds of shops display a large stock of fireworks; and their fabrication goes on not only in regular factories, but also in the houses of the working-classes, the finished rockets and crackers often being dried before an ordinary open fire. The result is, that we have one or more fatal explosions every autumn; so that the memory of Guy Fawkes's plot has probably in this way led to more deaths than he would have caused if he had succeeded in his nefarious design against the King, Lords, and Commons of England in parliament assembled. But, though in a less degree, the danger exists all the year round, and occasionally at fires the firemen are informed that there is gunpowder in the burning building; and they have to go in and search for and drag out the barrels or cases at the risk of their lives. At Manchester, in November 1868, eight barrels of gunpowder were found by the firemen in a chemist's store, after they had succeeded in extinguishing the fire; and in the same town, in March 1871, they had to get a hundredweight of powder out of a loft over the ceiling of a burning room. In both these cases, there was a very narrow escape of a serious explosion; and they are not solitary instances, for many others like them might easily be quoted.

The question naturally arises—Is there no remedy for this dangerous state of things? And the answer is supplied by Major Majendie's official report of his experiments on fire-proof gunpowder magazines. These experiments took place two years ago, but, unfortunately, at the time so little interest was felt in the subject, that much less public attention was devoted to them than their important practical results deserved. It is evident that only in rare instances can shopkeepers who deal in gunpowder in small quantities provide a properly isolated magazine for its storage. Generally, the gunpowder is kept in a cupboard at the back of the shop, or else in a room near the top of the house, in the hope that, in the event of an explosion, the lower stories will thus escape any serious injury. But this latter arrangement only makes it more difficult to remove the powder in case of a fire. The only safe plan would be to keep the powder in a small fire-proof magazine; but for a long time it seemed to be impossible to construct anything of the kind. An ordinary fire-proof safe would not be sufficient, for it would soon become overheated, and though books and papers would be safe in it, gunpowder would explode, and with a force all the more terrible on account of the confined space in which its action began. The

difficulties of the problem have been met and conquered by a patented invention of Messrs Milner & Co.

Their fire-proof magazine consists of a safe large enough to hold a hundred pounds of powder. The hollow sides of the safe, four inches thick, are divided into chambers, filled partly with alum, partly with a mixture of alum and sawdust. Now, more than half the weight of alum is made up of water, and when heated, it gives it off in the form of steam. If, then, the gunpowder safe is exposed to fire, the alum will be vaporised, and the steam entering the interior of the safe by small holes, will moisten the powder, and keep its temperature for a long time at about that of boiling water. It will gradually rise higher if the fire continues, but it will take several hours to reach five hundred and sixty degrees, the heat required to ignite gunpowder; and it has been ascertained that a safe would never be exposed to the heat of great fire longer than six hours, so that a resistance for that period would be enough to insure security from explosion. Such is the theory of the fire-proof magazine, and it was subjected to a severe practical test by the experiments made at Woolwich in October 1872.

Four magazines were tested on this occasion. Three of them were designed to resist six hours; the fourth, being of stronger construction, and containing more alum in its chamber, was expected to resist eight or nine hours. The first contained a few ounces of powder in paper and in tin canisters; the second, ten one-pound canisters of sporting powder; the third, a quarter-barrel of twenty-five pounds of powder; and the strong safe, five pounds in an open barrel, and five pounds in canisters. There were also thermometers in the safes, and pieces of alloy, which, by melting at various temperatures, would register the greatest heat of the interior of the magazine. The magazines were placed in brick furnaces holding about five tons of coal; and when the fires were lighted, they blazed up like a blast-furnace, producing a heat far greater than that of any ordinary conflagration. After six hours, the first magazine was removed from its furnace, and opened. The powder was found intact, some of it being damp with steam, but the thermometer shewed that the temperature had never risen higher than two hundred and ten degrees. The experiment was therefore a perfect success.

The other furnaces were allowed to burn on. The second and third safes exploded violently, the former, after resisting for nearly sixteen hours, the latter, after eighteen hours and three-quarters. A can of powder from No. 2 was picked up unexploded; and a piece of alloy from No. 3, the melting point of which was four hundred and eighty-two degrees, was found unmelted. The natural inference is, that in neither case had the general temperature of the interior of the magazines risen to five hundred and sixty degrees, but that the flame, driven by the blast, had burnt through the side of the safes, and exploded their contents by actual contact. The fourth magazine did not explode at all. After twenty-two hours, the fire was put out, and it was ascertained that its contents were uninjured, and the thermometer indicated a maximum temperature of two hundred and fifty degrees. It was evident that this safe would still have resisted for several hours; and the whole series of experi-

ments proved that a means had been found for protecting a small store of powder from any ordinary fire. We have heard of another invention for storing and carrying gunpowder with safety, which possesses still more remarkable properties, and which is about to become the subject of a patent. And, doubtless, the use of some kind of fire-resisting repository that shall hold powder safe from the attack of the fiercest flame, must be sooner or later rendered imperative.

S N O W - S T A Y E D.

IN TWO CHAPTERS.—CHAPTER II.

HELEN came down to breakfast utterly doleful. She had indulged in a good cry, to begin with; and now was filled with dismay at the prospect before her. On entering the breakfast-room, she found Mr Hilton had been waiting for her some time. 'I beg your pardon; I am very sorry to have kept you so long without your breakfast.'

Attracted by her despondent tones, he looked up with the first approach to interest he had manifested since her arrival, and said: 'I am sorry for you, Miss Cameron; this snow will make you a prisoner for some time, I am afraid;' and regret for himself was not unmixed with his sorrow for her.

'Yes; I am dreadfully sorry,' she returned, with a look of blank disappointment in her face, regardless of the ill compliment which had actually penetrated Mr Hilton's pachydermatous sensibility, and set him thinking. Now, when a man like that begins to think, he generally does so to some purpose. The latent chivalry of this strange being began to awake, and the man remembered with self-reproach that he had done nothing, as a host, to merit any other than the candid avowal he had just heard.

'I am sure I don't know what I shall do,' she moaned, as she stood irresolute by the fire, too genuinely miserable to be polite.

'Well, come and try some breakfast, and then we must see what can be done to preserve life in you afterwards,' he said, with something very like a smile shining on his face, the first she had ever seen.

As a gleam of sunshine attracts on a gloomy day, so did this smile attract Helen, and caused her to regard him with surprise.

He caught the look, and asked its meaning in such a friendly voice, that she said with simple bluntness: 'I saw you smile; I didn't think you could!'

The smile widened into a laugh, notwithstanding the unintended sarcasm, which he was conscious he deserved: the snow was falling outside, while within the first symptoms of a thaw had begun!

He, strange to say, was the first to be aware of it, as he glanced every now and then at the woe-begone face sitting near.

'Is it true,' she faltered, 'that the snow does not clear away for weeks?'

'Quite true.'

'O dear! what *shall* I do?' she sighed.

'We must try and make the best of it for you,' he answered kindly. 'I know this must be a dreadfully dull hole for a young lady to be shut up in, with only a couple of old people, like my mother and myself, for company; but I am afraid there is no help for it!'

'Are you fond of reading?' he asked, after a pause. 'I have some good books, but not in your style, I am afraid.'

'I am afraid not. You are very learned and clever, are you not?' she asked, with amusing simplicity, her eyes opening as she made the inquiry, as though treading on unknown and dangerous ground. 'The girls—the Narcots, told me so, and that made me rather afraid of you, and fancy—'

'I couldn't laugh, and had forgotten how to smile,' he interposed. 'Well, don't be frightened any more, for I am neither learned nor clever, that I know of; and I believe I can smile when provoked to do so; only living so much to myself, I seldom get an opportunity.'

'But that is your own fault, is it not? You hate—us—women, I mean; don't you? So the Narcots told me. Is it true?'

'Partly,' and he pushed his plate away as he spoke, and resumed his favourite attitude, with his elbows on the table; then, as if reflecting, he added in a lower tone: 'Still I believe I am capable of conversion, only no one has ever tried.'

'Perhaps you never gave them a chance,' she said, with a bright laugh, which displaced the cloud of melancholy for a moment, as she went to the window to see if she could discern signs of relenting on the part of her cruel jailer outside.

Mr Hilton, meanwhile, was revolving her last words in his mind, as he played with the bread-crums, saying to himself, that she had spoken rightly; and when a woman has once had the luck to drive a truth home into a man's mind, which he is willing to acknowledge, she has certainly gained a point.

On other mornings, he generally disappeared as soon as breakfast was over, and never shewed again until summoned to another meal; but this morning he sat on and on, even after the cloth was removed, and the distraction of arranging the crumbs into mathematical problems had been taken from him.

His train of thought evidently lay above-ground this morning. 'This girl would be in the house for weeks;' and he caught himself looking at her as she gazed hopelessly out of the window; and then this thought, at one time so repugnant, grew not altogether distasteful, although, of course, there would be a vast amount of inconvenience attending it, which he was forced to admit. It was a bad business on the whole, certainly, and he would have infinitely preferred if the snow had not fallen. But here she was; and he must make the best of it, and be thankful that, as far as women went, she was endurable after her kind, was unobtrusive at least, and would evidently rather not be staying; under these circumstances, he must make an effort.

Helen left the window, and took an easy-chair by the fire, resigning herself to the hopelessness of the situation, wondering when on earth Mr Hilton meant to go, when he surprised her by turning his chair right round in front of the fire, and en-

sconced himself in it as if to take up his position for the morning.

A quarter of an hour passed, during which time they both looked hard at the fire, while neither spoke. Then Helen said: 'Please, Mr Hilton, don't sit there all day and do manners on my account. I shall go up to my room, if you do. If I am to be a prisoner here for some time, don't add to my affliction by making me feel I am a trouble to you. I know you are always hard at work by this time. Indeed, it is on my conscience that I interrupted your studies at meal-times, as the Narcots told me you always read at such times.'

'I am afraid the Narcots have not given me a good character; paying me out for all my incivilities, I suppose. You might, however, give me an opportunity of proving them mistaken.'

'Yes; but I cannot bear disturbing the routine of any one's daily life. I feel as if they must look upon me as such a bore, an unenviable distinction at best.'

'But suppose I tell you, you don't bore me,' he answered with a smile.

'I shouldn't believe you, I am afraid. The leopard can't change his skin, or his spots; which is it? I am so stupid over quotations. No; it is the Ethiopian who has the skin.'

'But as I am neither Ethiopian nor leopard, but belonging to the Caucasian race of the genus homo, I may be permitted to change that mercurial organism existing in our species called mind. Without wishing to pay you any compliment, I desire to say that I should be glad to make your enforced imprisonment in my house less doleful than you at present contemplate. If you can suggest any course of amusement you would like to pursue, in which I can assist you, I will forego my books while you are here, and—place my time at your disposal.'

The last sentence came out with an effort which shewed the immensity of the sacrifice. Helen looked incredulous. 'Do you really mean it?' she asked.

'I am perfectly in earnest.'

'Then, I know what I would like.'

'What?' he inquired with a nervous pang; he knew not what wild prank he may have pledged himself to.

'You shall impart some of that wonderful learning of yours into my unfurnished brain. I have so long wanted to read Goethe in the original, but I don't know German sufficiently. Mrs Hilton tells me you know Goethe and German, and everybody and everything, alive and dead, by heart. Will you teach me German?'

'Has my poor mother been giving me a bad character, like the rest of the world?—with more cause, perhaps?' and he looked into the fire without answering her question.

'But you really are a German scholar—are you not?'

'Yes; I will teach you.'

'Oh, if you will, I'll think you the kindest creature in the world; and won't regret the snow,' she added archly. 'Then, while I am studying, you can go on with your reading and writing, can't you? and you won't find me so dreadfully in the way, will you?'

His face wore an amused look as he listened to her eager questions. 'So you want to read Goethe in the original. Well, you must follow me; but,

remember, I shall expect to be paid for my trouble.'

'How?'

'By being thought the kindest creature in the world; a decided novelty for me. Now, come into my library, and I will start you at once.'

'Oh, not in there!' and she drew back. 'I should be frightened to go in there. I hear you keep the bones of Noah and all the animals that went with him into the ark—to say nothing of those he left outside—in there.'

'But if I am to have a pupil, I must superintend the study,' he answered, laughing; 'and I promise Noah shall not put in an appearance, or in any way disturb your peace of mind; so follow me. You have never seen my library, have you?'

'No.'

'Then don't speak against such a haven of rest, of which you are ignorant.'

'What would the Narcot girls say, if they could only see us!' she thought, as she followed him on tip-toe, not quite certain, but determined to be brave.

'Oh, how very charming!' she exclaimed, as she surveyed the comfortable book-lined room, with its carved oak ceiling, its luxurious Persian rugs, its inviting easy-chairs, and its massive double writing-table, the whole made intensely snug by the glow of a bright crackling wood-fire.

'No signs of such a damp creature as Noah here,' he said, as he placed a chair for her at the writing-table, and rapidly looked out the requisite books, that he might find out how much she did not know, before setting her to work.

Through a fog of timidity, she managed to let him see she was fairly advanced, and then he set her some translation to do, himself taking the book while to read. The translation was effected, and pushed across the table for correction. He then gave her some other work to do, which kept her for two hours in the library, when she left him to seek his mother.

'I am so sorry for you, my love,' said Mrs Hilton, kissing her, 'but glad for myself. This snow will keep you with us for some time. I hope you don't mind?'

And then Helen was surprised to find she did not mind the gloomy prospect so much as she expected. The thought of reading Goethe in the original was cheering. So she said.

'Of course, I don't mind; only, you must give me something to do. Here; can't I finish these?' And she took a pair of wool slippers from a work-basket.

'Oh, thank you, my dear! if you will; they are for Robert; but they puzzle my poor sight so much, I have been obliged to leave them.'

So between the German lessons and the slippers, the days sped faster than she expected. Even the meals were growing positively agreeable, since her better understanding with the master of the house.

Ever since the German lessons had begun, he had spent his evenings in the drawing-room, and Helen, overcoming her nervousness, rewarded him by singing.

'We owe the snow a debt of gratitude,' said Mrs Hilton, one evening after Helen ceased singing. 'Do we not, dear?' she said, addressing her son.

Mr Hilton did not reply, for he was experiencing a new sensation; one he had not felt for years,

since those old Oxford days, when a pretty girl, to whom he had been devoted, jilted him, and made him almost despise her sex, vowing never more, if he could help it, to look on the face of any woman, save his mother; a vow he might have kept religiously to the end of his days, but for this fall of snow. Now, circumstances were leagued against him. What vows or resolutions could stand against teaching a 'nice' girl every day for two hours; having the same 'nice' girl sitting as his companion at every meal; and, more than all, the same 'nice' girl singing, as she did, evening after evening, the most divine little melodies in the most sympathetic manner! St Anthony himself must have given in under such a cross-fire of allurements!

He had felt the spell growing gradually, until, at the end of the third week, he stood face to face with the truth, and knew he was a conquered man. She stood between him and his most cherished books and researches, and then he remembered with pain that his youth was all gone, and he had only the tall, lean, grizzled remnants of a man to offer to this bright girl, beaming with youth and life; and the knowledge well-nigh proved overwhelming. During the lesson hours, he was calm and undemonstrative enough; but when they were over, and she was gone, there ensued a strange feeling of desolation.

Soon the weather shewed signs of relenting. About a week later, Helen remarked, looking at the snow: 'You will soon get rid of me now.'

'You will be better pleased to go than we to lose you,' he returned dolefully.

'I don't know. I shall be sorry to leave the German lessons behind. What a happy thought that was of mine!' she exclaimed.

'I am not so sure of that.'

'Why? You mean they have interrupted you so dreadfully!'

'Yes,' and he left the room.

She was purposely late at dinner that day, having gone into the library to fetch the book that lay open on his table, which she brought, and placed open, without a word, at his side.

'There! I am not going to open my lips to you all dinner-time. I know I have been a dreadful interruption.'

He looked at her reproachfully—tenderly, as he closed the book without a word.

She read the look, and grew embarrassed. The dinner passed off in silence.

That evening a note came from the Mount Farm which ran as follows:

DEAREST HELEN—Have your miseries equalled or surpassed ours? We can only liken ours to what the king must have felt when he called next morning to know if Daniel had been devoured or not. Was anything ever so unfortunate as this fall of snow? Do tell us how you have preserved your senses throughout this fearful blockade, for we are positively concerned, knowing how and with whom we left you; our cruel laugh at parting has often risen up in judgment against us, making us remorseful; but we are coming early, the day after to-morrow, to fetch you home. Papa says we may venture in the carriage then, not before.

We hope you have kept a journal detailing your observations of the ways and customs of living

fossils. Have you discovered to what species of defunct animal Mr Hilton belongs—*Megatherium* or *Dinotherium*? But from the portraits of those worthies, they are far too comfortable-looking to claim relations with such a starved specimen as Mr Hilton, who resembles the *Pterodactyle* more, in the skeleton formation, which leaves a generally uncomfortable and disagreeable impression.

We are anticipating glorious fun from your description, to make up for past sorrows, and our taste of Siberia.

Until the day after to-morrow, then (Annie begs I will write in the plural, and she will append her name), we remain, your affectionate friends,

CLARA and ANNIE NARCOT.

'Even snow-storms have an end!' sighed Helen, as she sat down to reply to her friends' letter in no cheerful mood.

She said nothing to Mr and Mrs Hilton that day, but the next morning at breakfast she remarked to the former: 'I am coming to you for one more German lesson, if you will be troubled to give it me.'

His hand trembled. Fatal sign in a man! He may be confidently given up for lost when that symptom appears. His hand trembled, and Helen saw it.

As he made no reply, she said: 'May I come?'

'You know your way,' he answered impatiently, sighing, and soon after left the room, his face having grown many shades paler since her first question.

Half an hour later, she found him in the library, looking utterly miserable.

'What is the matter?' she inquired, as she stood beside him.

His heart was in his eyes as he looked up, with no gaze as if searching into the dead past, but a broad, open, earnest look into the future, as he said: 'I think I am almost sorry the time has come for you to go. I have grown fond of teaching. I wish you would stay a little longer, and let me try to teach you one thing more; and here one arm stole timidly, oh, so tremblingly, round Helen, who forgot to resent the liberty!

'What is that?'

'To love me a little,' he whispered, in a voice choked with emotion, which betrayed how hopeless he felt the request, but which now meant everything to him.

'Impossible!' she murmured, shaking her head.

'I feared so!' he said despondingly.

'Do you know why?' she asked, looking up in his face.

'Why?'

'Because I have learned that lesson already, and know it quite by heart!'

The German fared badly that day, as they sat together and conned over another lesson, the same in all languages, the truest and the most blessed they or any one could learn.

'Oh, what will the Narcots say?' she exclaimed. 'How they will tease me!' and she gave him their letter to read, over which he laughed heartily.

'Tell them, *nous avons changé tout cela*, and that you have dug up the old fossil, and placed him in the best museum any man can have—a woman's loving heart, where he hopes to remain for ever!'

'But, then, I don't think, after all, you could

have been a proper, decent kind of fossil, you know,' she said archly.

'Why?'

'Because I found you so near the surface; and it was not such very hard work digging you out,' she added with a bright, provoking laugh, 'for you were only buried under a fall of snow!'

THE MONTH: SCIENCE AND ARTS.

CLEVER things in industry and invention are at times put on record. Thus, cockchafer are now made useful to artists, for a Frenchman has found that the insects, after feeding, yield a few drops of a liquid which answers the purpose of Indian ink. Different tints can be obtained by feeding with different kinds of leaves.—Near Königsberg there are turf-bogs of large extent; a clever experimentalist converts the turf into millboard and paper. This paper is said to resemble straw-paper in brittleness.—Clever manufacturers make and sell meat-flour, and recommend it as nutritious. This flour is made from the beef used in the manufacture of 'Liebig's Extract'; all the juices, all the goodness, are squeezed out, and then the worthless beef is ground up for sale. The buyers are, of course, cheated, for the meat-flour thus produced contains no nutriment. It would be better to eat sawdust.—A Belgian boils beef-bones in water for some hours, with addition of rock-salt and a little alum, and thereby obtains a size which can be used with advantage in the preparation of cotton and silk goods.—Two Frenchmen have proved that sawdust and wheat-bran, and old rotten oak wood, will each yield a gray dye—one yellowish, the other bluish; and others announce that skins can be tanned by soaking them twenty-four hours in a solution of chloride of zinc; and that the very best gelatine for photographic purposes is that prepared with addition of a small quantity of chloride of zinc.

Any one who has ridden in a cab, or in an old third-class carriage, knows that on letting down the window, it falls with a clatter. In modern railway carriages, the clatter and risk to the glass are prevented by placing at the bottom of the hollow an arched piece of india-rubber. The window falls on this without noise. India-rubber is used in the best kind of buffers; tramway cars rest on cushions of india-rubber, instead of metal springs. The wear and tear of roads in mines and quarries, and indeed on roads generally, would be lessened if the bearings of trucks and carriages were fitted with a layer of india-rubber.

The leatheren 'hose' or pipe through which water is pumped by a fire-engine is heavy, and is liable to crack. An inventor at Brussels makes a hollow pipe of hemp, which he tans, and thereby renders waterproof. This pipe is then lined with a thin coat of india-rubber; and thus is formed a 'hose' which is flexible, and so light that one man can carry it a considerable length. Its strength, too, is so great, that a pipe of less than two inches' internal diameter will resist a pressure of fifteen atmospheres; and a three-quarter-inch pipe will

resist thirty atmospheres. For fire-engine hose, for conveyance of water, use in breweries, and manufactories, these tanned hemp pipes are very serviceable.

The Duke of Sutherland, as we lately mentioned, is reclaiming wild wastes, by the aid of steam and machinery, on a very grand scale in his territory in Scotland. He has recently introduced a new engine on his mining estates in Staffordshire which is worth a passing notice. This engine, of fifty horse-power, is covered by its boiler as a house by its roof, and looks like a locomotive without wheels standing on a heavy cast-iron base. It does the work usually done by a mining engine—hauling up and sending down—with great facility and economy, for it burns 'slack,' and consumes not more than one ton in twenty-four hours. Moreover, it can be set to work wherever there is standing-room, for the heavy cast-iron base takes the place of the solid brick foundations usually constructed for a mining engine.

In New York, the cost of clearing away a heavy fall of snow with carts amounts to eleven thousand dollars for one mile of street. A machine has been invented which produces superheated steam, and distributes it in any direction as required. This machine travels three miles an hour, and clears a mile of street by melting the snow with the hot steam, at a cost of seventeen hundred dollars a mile.

To prevent the fouling and formation of scale in steam-boilers, Mr W. T. Bate, of Conshohocken, Pennsylvania, has invented a 'feed-water heater and filter,' through which all the water passes on its way to the boiler. The heater is a vertical cylinder: at each side of it, a smaller cylinder, divided into horizontal compartments, and provided with taps and connection pipes, is fixed. These two are the filters, one for hot, the other for cold water. The horizontal plates are perforated, and the compartments are loosely filled with cotton-wool. Cold water is forced upwards through the filter, leaves behind most of its impurities, and passes into the heater. From this, when hot, it is forced upwards through the second filter, and flows thence comparatively pure into the boiler. By this means the fouling of boilers may be very much retarded, if not altogether prevented.

That hard steel can be cut by soft iron, is an old story; but the fact has recently been turned to good account, for a firm at Sheffield have set up a disc three feet in diameter, which makes three thousand revolutions in a minute. This is equal to three hundred miles an hour. Whirling at this tremendous speed, the disc cuts off the ends of heavy steel railway bars in from three to four minutes, leaving them smooth and clean. Cutting off the ends used to be an expensive and laborious process; henceforth, it will be comparatively easy.

The advantageous use which may be made of a wire-screen in protecting a rain-gauge is the subject of a paper, in the *Journal of the Scottish Meteorological Society*, by Mr Alexander Buchan. A curious and interesting fact, which may be full of instruction for some readers, is mentioned in that paper. In a nursery garden near Edinburgh, one chilly evening, an old net was stretched over beds of seedling ash-trees, by way of protection. The next morning, it was seen that the uncovered beds had not suffered from frost; while the beds covered

by the net had suffered. The explanation, says Mr Buchan, is this: 'The plot where the plants grew is quite flat, and open to the horizon all round, there being no trees, walls, or other obstructions that could impede in any appreciable degree the cooling of the earth by nocturnal radiation. Consequently, the cooling of the surface and of the air in immediate contact with it went on unchecked, and against this cooling process the thin covering afforded by the meshes of the net was too slight and flimsy to be of any avail. Over the beds uncovered by the net the slight wind which was blowing had free access, and the lowest layers of air being thereby mixed, the air, cooled by contact with the ground, was not suffered to rest on it, but was mixed up with the air above it; consequently, the temperature did not fall so low as it otherwise would have done. On the other hand, to the beds covered by the net the wind had no access, owing to the intervention of the net; and the air strata not mixing, the cold air settled on the surface, and the temperature fell so much lower than it did over the uncovered beds adjoining, as to destroy the seedling plants, which happened to be just at that stage of their growth when they are most susceptible of injury.'

'From these facts, it is easy to see what a powerful obstruction is offered to wind by the intervention of such an apparently slight object as a fishing-net, or a wire-screen with meshes an inch or an inch and a half wide; and it is evident that when the net or screen is spread horizontally over the surface, the obstruction thus presented to the access of the wind to objects beneath will be very complete.'

The herring-fishery, and atmospheric and other circumstances connected with it, have been made the subject of inquiry by the same Society, and they have thereby ascertained that thunder-storms and the temperature of the water have a marked influence. The 'take' of herrings is diminished by a storm and by a chill. Before final conclusions can be arrived at, it will be necessary to make observations on the temperature of the water farther from shore.

Within the past few years, observers in Europe have come to the conclusion, that the years of most rainfall are the years of most sun-spots. There are exceptions, but that is the general law. The theory has been tested by investigators in America, and Professor Brocklesby of Harvard College states the result very cautiously: 'I think,' he says, 'we may venture to infer, that so far as trustworthy observations have been made throughout the United States, they point to a connection existing between the variations in the sun-spot area and those of the annual rainfall; the rainfall tending to rise above the mean when the sun-spot area is in excess, and to fall below when there is a deficiency of solar activity.' Another noteworthy fact is, that the water of the great American lakes is highest in the years of most sun-spots. It was mentioned at the last meeting of the British Association, that when there are most sun-spots, then there is most ozone in the atmosphere.

At a recent meeting of the Odontological Society, a paper on Dentifrices was read, in which it was shewn that the mouth, if not frequently and carefully cleaned, becomes infested with vegetable and animal parasites. The action of these on the teeth

is hurtful, and decay can only be prevented or retarded by frequent cleansing. The object of tooth-powders is stated to be 'to keep the teeth perfectly clean ; to neutralise the acids, and to counteract the fermentation which takes place in the mouth ; to preserve the mucous membrane free from that whitish, slimy coating which forms there ; and to correct all unpleasant odour, whether proceeding from the teeth, the tongue, or tonsils.' The author continues : ' We may advise as useful for the purpose, the employment of soap, which, by imparting a slightly alkaline quality to the water, neutralises the acids, and prevents the development of fungi.' In some cases, precipitated chalk mixed with the soap assists the cleansing action ; and a solution of permanganate of potassa is recommended 'as an excellent mouth-wash,' inasmuch as it is an antiseptic, prevents fermentation, and 'exercises a beneficial action upon the mucous membrane of the mouth.' Under the authority of the Society, these statements may be safely accepted.

The fluid part of the blood, as some readers know, is almost as colourless as water. The red colour is produced by red corpuscles, which float in the fluid in such quantities that it appears to be red throughout. These corpuscles, or little bodies, which owe their colour to the presence of iron, are in shape something like a silkworm's egg, but are so small that they can be distinguished only with the aid of a microscope. Their number varies with the state of health, and sometimes they are so few that great paleness of the skin is the result, and the health is weakened. Some observers are of opinion that the number of corpuscles varies with the rise and fall of the barometer ; but of this there is no sufficient proof. But it is a fact that a French physiologist has devised a method by which the corpuscles can be counted. Hence regular daily observations on the condition of the blood, and, consequently, of the health, can be carried on under different circumstances. M. Malassez, the physiologist referred to, has made his observations, after repose, after exercise, after food, after baths, and in town and in country. Exercise increases the number of red corpuscles, and at the same time the fluids of the body are diminished by perspiration. In country air, the number is much larger than in town air, and is larger also in winter than in summer. The effect of baths has not yet been satisfactorily ascertained ; but taking the general result, it is clear that this method of diagnosis may become of importance in the hands of medical practitioners.

These researches connect themselves with others intended to ascertain the amount of iron in the blood, and its variations. The health varies with the increase and decrease of iron, as it does with the rise and fall of the corpuscles ; and on the proportion of iron in the blood depends the proportion of oxygen. It is believed that by prosecution of these researches, means may be discovered for mitigating or preventing diseases of the spleen.

One of the reasons assigned against the practicability of working in very deep coal-mines is, that at a depth of about three thousand feet, the temperature of the earth is that of the blood—ninety-eight degrees, and under such conditions, labour is thought to be exceedingly difficult. The deepest mines in England are less than two thousand five hundred feet. These are exceeded by three in Belgium, where the deepest is three

thousand five hundred and eleven feet, and does not require any extraordinary means of ventilation. With these facts in view, Professor Boyd Dawkins said, in his inaugural address to the Manchester Geological Society : ' It seems, therefore, very probable that the difficulties offered to the sinking of mines at a greater depth even than four thousand feet can be overcome by the genius of our engineers, and that, by means of increased ventilation, and the widening of the shafts, the temperature may be reduced, so as to allow coal being worked considerably below the limit chosen by the government commissioners in their estimate of the amount of coal available in this country.'

Eldon Hole is a cavern in a high hill of the Peak country of Derbyshire. The entrance is a well-like opening one hundred and eighty feet in depth, and, of course, wonderful stories have been told of so deep a hole : that it had no bottom ; that a man and a cat were once let down and drawn up dead ; that a goose once flew down and came out at the Peak Cavern, some four miles distant. But a hundred years ago, a Fellow of the Royal Society went down, and his account of what he saw is published in the *Philosophical Transactions*. In 1874, a party of four men repeated the experiment, aided by a windlass. The bottom at one hundred and eighty feet proved to be a steep slope of lumps of limestone. Down this slope they scrambled, until the tunnel-like passage expanded suddenly into a magnificent hall about one hundred feet across and seventy feet high, with a floor sloping steeply, as in the passage above. The lowest part of this floor and of the great hall is two hundred and forty feet beneath the surface. The only opening discoverable was the entrance. The hall or cavern is beautified by 'splendid stalagmitic deposits'—'from the roof hang fine stalactites, and the sides are covered with almost every conceivable form of deposited carbonate of lime ; in some places smooth and white as marble, in others like frosted silver.' When viewed by the light of Bengal fire, the effect must have been almost enchanting, as we are led to believe from an account of the descent communicated by one of the party to the Philosophical Society of Manchester. Beautiful though it be, Eldon Hole is not likely to attract many visitors, owing to the difficulty of entrance ; but they may gratify their curiosity by a walk into Ingleborough Cave, Yorkshire, where the phenomena, extending half a mile underground, are on a much grander scale than in the Derbyshire Hole.

The *Thunderer*, one of the turret ships of the royal navy, is about to be fitted with guns which will be loaded by machinery, namely, the hydraulic apparatus invented by Sir William Armstrong. 'The gun,' we are told, 'is allowed to recoil after firing until it is entirely within the turret, by which time the muzzle is depressed almost to the level of the deck. The turret is then wheeled round away from the enemy's fire, the charge is raised to the muzzle of the gun, and is rammed home by a piston which comes up through the deck.' In this way the ponderous mass, with all its tremendous potentiality, is manipulated at pleasure.

The Macomber gun, so named after an American inventor, recently tried at Portsmouth, is said to have a range of nine miles. It is made of discs of soft tough iron, well hammered and 'jump-welded,' and is coated outside with rigid steel ; a

combination which insures great strength. This gun is a breech-loader, and in the account of the experiments made therewith, it is stated that the initial velocity of the shot was more than two thousand feet a second.

Experiments have been made at Woolwich to discover the best sound-signal for foggy weather. Ordinary service guns, guns with trumpet-mouths, and gun-cotton hung in front of a large reflector, were fired alternately, while the committee appointed to judge of the result rode farther and farther away, until they were miles distant. The different sounds could be discriminated, and it is hoped that a practical application of gun-fire signals may be made in dangerous places around our coast.

A PROFESSOR OF CONVERSATION.

We learn by a paragraph in the *Globe* newspaper that a new trade has been struck out—the teaching of people to converse in a pleasant way on various subjects, or what might more properly be called cramming to take a part in ordinary conversation. Not a bad idea, if elocution and the art of getting over bashfulness are at the same time attended to! The following is the paragraph in question :

'Boswell relates that Johnson used to say the happiest conversation is that of which nothing is distinctly remembered but a general effect of pleasing impression. It is almost universally admitted nowadays that even that humble effect has passed away, and that the guests of drawing or dining rooms are, as a rule, dull and stupid. It is no use stopping to inquire why it is so, although there is a very good reason for the melancholy fact. There are, however, bright prospects for us in the future. We have only to take a trip to Paris, and there is a gentleman there—nay, more, a Baron—whose pupils, after a short intercourse with him, and the deposition of a small fee, will be able, after future successes, to address him: "We are now able,

Formed by thy converse, happily to steer
From grave to gay, from lively to severe."

For the Baron H—— has the honour to announce, through the French papers, that he is now in Paris, and that, being endowed with a remarkable talent for conversation, which has been nurtured by the profoundest study—a rare combination in these days—and having amassed, in his frequent and varied travels, a fund of instructive and interesting observations, he is enabled to place his talents at the disposal of those masters and mistresses of houses who are much exercised at being unable to converse fluently. The Baron will either impart his instruction abroad or at home. His drawing-room is open to subscribers twice a day, and is the rendezvous of a select circle, the subscription being only a sovereign a month. Three hours of his day are consecrated to an instructive but amiable chat on the news of the day, literary and artistic subjects, observations on manners, over which an archness, unmixed with malignity, will preside; and a few discussions on various subjects, from which politics will be strictly excluded, will make up an agreeable evening's *séance*. The evenings abroad are more expensive. In the first place, the Baron declines

to dine out more than three nights a week. He charges twenty francs for dinner, but the evening party afterwards is not included in that sum, which lets in a fierce light on the Baron's sagacity. Separate arrangements must be made for puns and *jeux de mots*. The Baron will also supply guests, suitably attired, who will sustain and vary the conversation, when those who employ them do not care to take the trouble to make replies or observations. Can these be the ancient "Adelphi guests" who have so mysteriously disappeared? And these guests may in the daytime be hired as friends by foreigners, or persons not in society. How willingly would the late Mr Thackeray have paid his subscription to the amiable Baron, and how much the world has lost by his not living to do so.'

AN ANNIVERSARY.

In a chamber old and oaken,
In a faint and faltering way,
Half-a-dozen words were spoken,
Just eleven years to-day.
What was bound and what was broken,
Let a woman's conscience say.

Half-a-dozen words excited,
Whispered by a lover's side ;
Half delighted, half affrighted,
Half in pleasure, half in pride :
And a maiden's troth is plighted,
And a false love-knot is tied.

Has a maiden not a feeling
That can swell, and sing, and soar ?
Came not o'er her spirit stealing
Thoughts of things that were before ?
In her heart did no revealing
Tell her love was something more ?

Barely half-a-dozen glances,
Half in earnest, half in mirth—
Five, or six, or seven dances—
What is such a wooing worth ?
Courtship in which no romance is,
Cannot give a true love birth.

Passion is a pain and power
Slowly growing unto might,
By long vigils, not the hour;
Real love is not at sight :
'Tis a weed ; 'tis not a flower
That arises in a night.

Lightly is the promise spoken,
Lightly is the love-knot tied ;
And the maid redeems the token,
Living at her husband's side ;
And her heart—it is not broken,
But it is not in its pride.

With the years shall come a feeling,
Never, may be, felt before ;
She shall find her heart concealing
Wants it did not know of yore :
Silently the truth revealing,
Real love is something more.

Printed and Published by W. & R. CHAMBERS, 47 Paternoster Row, LONDON, and 339 High Street, EDINBURGH.
Also sold by all Booksellers.